**IT Applications Unit 3, AOS 1, Online Communities**

Complete the following, from Chapter 2, Problem-solving Methodology, pgs, 60-80

**Problem-solving Methodology: 4 Stages**

**Analyse**

**Design**

**Development**

**Evaluate**

**Case Study:**

**Indigenous Language Trust, (ILT)**

Using the case study, ILT complete the following:

**Analysis of the problem**

This stage involves the following three steps:

1. **Determining the solution requirements**
2. What needs to be established?

When determining the solution requirements you need to establish what information is required, what data is need and what functionality needs to be included on the website.

1. How is the problem best defined?

The problem is best defined by correctly identifying what the problem is, this is done by writing a simple problem statement, and then rewriting the problem statement as a question that directs or indicates the desired course of action.

1. The aim of problem analysis is to ensure that the problem is clear enough to effectively analyse it and efficiently solve it. Define these two terms, efficiency and effectiveness.

Efficiency refers to the cost time and effort that may be put into designing a solution, whereas effectiveness is the quality, relevancy, timeliness and clarity of the solution.

1. What type of organisation is the ILT?

The ILT, Indigenous Language Trust, is a not for profit organisation.

1. In your own words, define the problem for ILT.

The ILT’s problem is that the way of exchanging data, through methods (such as email, telephone, fax and mail) is not efficient and often results in mismanagement of information across the organisation.

1. Identifying data and information needed for the solution, p 62;
   1. Need to identify where data is coming from for online community – inside or outside

The information such as policy documents may come from within the organisation, whereas information regarding the local Indigenous population may come from outside the organisation.

* 1. In the ILT case study what is the information needed for the solution?

The information needed for the solution is as follows:

* Contacts, who can be contacted for advice
* Policy documents, for example the documents that regard the management of images of deceased people
* Documentation regarding the local Indigenous history, for example audio files in which elders talk about their region
* Information regarding the natural cultural heritage, for example statistics regarding population, literacy and health issues.

1. Identifying the functions needed for the online community solution, p 63
   1. The functions needed for online communities can be separated into 2 distinct categories,
      * how the solution functions and
      * Attributes of the solution. List the characteristics of each of these.

The characteristics of how the solution functions are:

* How does the information need to be broadcasted?
* Does information need to be exchanged?
* Does the knowledge need to be stored in a central location?

The attributes that a solution might possess are:

* Easy to use (user friendly)
* Reliability (how reliable is the online community)
* Portability (can the website be accessed by mobile devices)
* Robustness (can the online community handle how many people will be handling it at one time)
* Well maintained (is there someone who is going to maintain the different sections of an online community)

1. What are the functions of the ILT website solution?

The functions of the ILT solution are:

* Broadcasting information to the community about events and the projects they are involved in.
* Exchanging information between offices about projects they are working on and any challenges they are having.
* Encouraging community groups to exchange information in a secure environment.
* Storing documents that conation knowledge about the organisation in a central secure environment.

1. **Identify the constraints on the solution, p 64**
   1. List the technical and non-technical constraints.

The technical constraints are:

* The cost of the solution, this could determine if the organisation uses tools that are freely available or whether they use tools that they subscribe to
* The speed or time that it takes to exchange information
* How secure the solution needs to be, and whether it needs to be open or closed to the public
* The number of people accessing the online community at one time

The non-technical constraints are:

* Are here issues with privacy when exchanging information?
* Are there copyright issues that need to be taken into consideration?
* Are there any cultural, gender or age constraints that need to be considered?
  1. What are the constraints on the ILT solution?

When taking in to consideration to the ILT’s solution constraints, we can see that there will be a set number of people accessing the website in each office, but non-technical constraints are harder to determine for example with regards to the cultural aspect, Aboriginals have strict rules with the use of the images of the deceased.

1. **Determine the scope of the solution, p 66**
   1. What needs to be considered in the scope of the solution?

When determining the scope of a solution, you need to carefully consider the benefits the solution will have on efficiency and effectiveness for the organisation. The scope should outline what the solution can and cannot dot, it should also indicate the boundaries of the solution. The scope should provide an appropriate guide for the design stage to produce an appropriate solution.

* 1. In the ILT case study list the benefits or the scope of the solution in terms of
     1. Efficiency and

The benefits on efficiency are:

* Time, the time taken to access and exchange information via the website solution should be reduced.
* Cost, the cost associated with information exchange will be reduced (by allowing people working in each of the offices to access the centrally located documents).
* Effort, the sharing of information will allow each of the offices to build on the information they have, rather than having to rediscover it when working on a project.
  + 1. Effectiveness

The benefits on effectiveness are:

* Quality, the quality of the decision-making will be higher due to the collaborative nature of the information exchange.
* Relevancy and timeliness, the information that is broadcasted to the public will be relevant and timely.
* Completeness, information that is gathered using collaborative tools by the online community will be more complete.

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